

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

ADJUSTACAM LLC
Plaintiff

v.

AMAZON.COM, INC. *et al.*,
Defendants

Case No. 6:10-cv-329-LED

JURY TRIAL DEMANDED

**EXPERT REPORT OF DR. RICHARD KLOPP, P.E.
RELATING TO INVALIDITY OF US PATENT NO. 5,855,343**

I. INTRODUCTION

1. I, Richard W. Klopp, have been asked by counsel for Newegg, Inc., Hewlett Packard Company, GearHead, LLC, and Sakar International, Inc. to perform an analysis of Claims 1, 7, 8, and 19 of U.S. Patent No. 5, 855,343 titled, “Camera Clip” (“the ’343 Patent”). I have been informed that Plaintiff AdjustaCam LLC (“AdjustaCam”) has accused Best Buy Co., Inc. D/B/A Best Buy D/B/A Rocketfish; Best Buy Stores, LP; Bestbuy.Com, LLC; CDW, LLC; Fry’s Electronics, Inc.; GearHead, LLC; Hewlett-Packard Company; Kohl’s Corporation D/B/A Kohl’s; Kohl’s Illinois, Inc.; Micro Electronics, Inc. D/B/A Micro Center; Newegg, Inc.; Newegg.Com, Inc.; Office Depot, Inc.; Rosewill, Inc.; Sakar International, Inc.; and Wal-Mart Stores, Inc. (“Defendants”) of infringing Claims 1, 7, 8, and 19 of the ’343 Patent. This report contains my opinions and basis regarding the validity of the ’343 Patent, as well as my background and qualifications, testimony in the past four years, and compensation. This report was prepared at the request of Parsons Behle & Latimer, Farney Daniels, LLP, Mirick O’Connell, LLP, and Ezra Sutton & Associates, PC pursuant to Rule 26(b) of the Federal Rules of Civil Procedure.

II. SUMMARY OF OPINIONS

2. Plaintiff has asserted Defendants are infringing Claims 1, 7, 8, and 19 of U.S. Patent No. 5,855,343 titled, “Camera Clip” (“the ’343 Patent”). Based on my review of the ’343

Patent, its prosecution history, relevant prior art, other documents, and my understanding of the law, it is my opinion that Claims 1, 7, 8, and 19 of the '343 Patent were anticipated and/or obvious in view of the prior art. In particular, my opinions are as follows:

Opinion 1: Claims 1, 7, 8, and 19 of the '343 Patent were anticipated by the Irifune publication. In addition and in the alternative, Claims 1, 7, 8 and 19 of the '343 Patent were obvious in light of the Irifune publication in view of the prior art.

Opinion 2: Claims 1, 7, and 8 of the '343 Patent were anticipated by the '783 Patent. Claim 19 would have been obvious to one of ordinary skill in the art in view of the '783 Patent. In addition and in the alternative, Claims 1, 7, and 8 of the '343 Patent were obvious in light of the '783 Patent in view of the prior art.

Opinion 3: Claims 1, 7, 8, and 19 of the '343 Patent were obvious to one of ordinary skill in the art in view of the '475 Patent in combination with camera head panning.

Opinion 4: Claims 1, 7, 8, and 19 of the '343 Patent were anticipated by the '308 Patent. In addition and in the alternative, Claims 1, 7, 8 and 19 of the '343 Patent were obvious in light of the '308 Patent in view of the prior art.

Opinion 5: Claims 1, 7, 8, and 19 of the '343 Patent are not fully enabled by the specification in light of the Court's claim construction order. In addition and in the alternative, Claims 1, 7, 8, and 19 are indefinite in light of the Court's claim construction order because they fail to particularly point out and distinctly claim the invention.

III. LIMITATIONS

3. The data, analysis, and conclusions included in this report are based on ongoing review of documents and other materials available to Exponent. Should additional information provide further insight, Exponent reserves the right to supplement this report. The purpose of this investigation is to assist in a patent litigation. It is not explicitly intended for other purposes. The opinions expressed in this report are held to at least a reasonable degree of engineering certainty. Although Exponent has exercised usual and customary care in the conduct of this analysis, the responsibility for decisions regarding its use and regarding the products within its scope remains with Retaining Defendants.

IV. QUALIFICATIONS

4. I am a Senior Managing Engineer employed by Exponent Failure Analysis Associates, Inc. ("Exponent") in their Menlo Park, CA office. I am a trained mechanical engineer licensed to practice in the State of California. I hold four academic degrees: a B.S. in Mechanical Engineering from Lehigh University, and a Sc.M. in Engineering, a Sc.M. in Applied

6). The camera is rotatably attached to the camera attachment shaft (9), controlled by the attachment screws (10) and (11), and constrained by the top surface of camera fixed part (2), as shown in Figure 3.

... a support frame hingedly attached to said hinge member to engagingly support said hinge member on the display screen, said hinge member rotating over a second axis of rotation relative to said support frame, the camera being maintained adjacent the edge, rotation of said support frame being prevented along an axis substantially parallel to said second axis where said second axis is substantially parallel to said edge.

53. The central shaft (1) and arms (3) and (4) comprise the support frame of the device disclosed in the Irifune publication. The central shaft (1) and arms (3) and (4) are attached to the camera fixed part (2) (hinge member) and can be rotated relative to it about a second axis of rotation, as shown in Figure 7.

54. The device arms (3) and (4) with the central shaft (1) (support frame) support the camera fixed part on an object (such as the back of a chair or a computer display). As illustrated in Figure 5, when the device is installed on an object having two surfaces with an edge between them, the camera is maintained adjacent to the edge. Further, when the device is installed on such an object, rotation of the support frame relative to the object about an axis substantially parallel to the edge is prevented. This can be seen in Figure 7 (Irifune Figure 10-2) where the arms (3) and (4) are “clamped” on the object.

55. As discussed above with respect to Claim 7 of the '343 Patent, the Irifune publication does not specifically describe use of the device on a display screen; however, the device is adjustable for many possible objects, including a display screen. Moreover, Irifune describes the device as being “lightweight” and usable for “various different conditions,”¹⁶ teaching that the device is to be made light enough for any applicable environment. For example, a person of ordinary skill would understand that the Irifune publication teaches that the device is to be made light enough to avoid tipping a display screen. Because Irifune discloses the device supported on a wooden log, a chair, and a tabletop, the intent of universal application is clearly evident, and therefore it would have been readily apparent to a person of skill in the art that the device described in the Irifune publication was capable of being used for a display. A person of ordinary skill in the art would have readily recognized that the Irifune device could be

¹⁶ “The present device is a lightweight and small camera mounting device which enables a camera to be easily set at different positions under various different conditions.” (Irifune publication, Detailed Description of the Device, pg. 2)

manufactured using ordinary processes (such as injection molding or die casting) and materials (such as plastic or light alloy) to yield a device that was lightweight, stable, and readily attached to a display screen.

56. Alternatively, even if it could be argued that the Irifune publication does not explicitly disclose application of the device to a laptop display screen, such use would nonetheless have been obvious to a person skilled in the art. As discussed, because of the emergence of video conferencing software runnable on laptops without built-in cameras, there would have been a clear need for a device to easily affix an external camera to a laptop display.

It would have been obvious to a person skilled in the art to use ordinary processes and materials to yield a device that was lightweight, stable, and readily attached to a display. Moreover, support systems designed to support cameras on laptop display screens were known in the art, such as the '783 Patent (discussed below). Persons skilled in the art would have been motivated to combine the teachings of the '783 Patent with Irifune to create a device readily attached to a display.

57. Appendix C contains a claims chart analysis of the validity of the '343 Patent with respect to the Irifune publication. As shown in this chart and the above analysis, under my understanding of the law, the Irifune publication anticipates each and every element of Claims 1 and 8 of the '343 Patent. The chart further shows that with the exception of explicitly describing use on a laptop display, the Irifune publication anticipates each and every element of Claims 7 and 19 of the '343 Patent. The use of the Irifune camera support on a laptop display screen would be an obvious application of such a device, as disclosed in prior art references such as the '475 Patent and the '783 Patent. Therefore, as shown in the claim chart and the above analysis, and under my understanding of the law, the Irifune disclosure anticipates or renders obvious each and every element of Claims 1, 7, 8, and 19 of the '343 Patent.

Opinion 2: Claims 1, 7, and 8 of the '343 Patent were anticipated by the '783 Patent. Claim 19 would have been obvious to one of ordinary skill in the art in view of the '783 Patent. In addition and in the alternative, Claims 1, 7, and 8 of the '343 Patent are obvious in light of the '783 Patent in view of the prior art.

58. The '783 Patent discloses a device for supporting a camera on either a substantially horizontal surface, such as a tabletop, or on an object, such as a laptop display.

Although the '783 Patent is titled "Digital Camera for a Computer," a person of ordinary skill in the art would readily recognize that the '783 Patent discloses both a camera and a support device. The device is adjustable such that the camera can be rotated relative to a so-called hinge member about one axis. In addition, the hinge member, and therefore the camera, can be rotated relative to the support frame, and therefore the supporting surface or object, about a second axis that is nominally perpendicular to the first. When the camera is supported on a display screen, relative motion of the support frame with respect to the clamped object is prevented, including rotation about an axis substantially parallel to the edge of the object. For the following analysis, the asserted claims of the '343 Patent are repeated in italics followed by discussion.

Claim 1

Apparatus for supporting a camera, having a lens ...

59. The '783 Patent, entitled "Digital Camera for a Computer", describes a support for a camera,^{17, 18} as illustrated in Figure 9. The device is primarily comprised of a photographic lens assembly (1), and adjustment block (2), and a circuit box (3).¹⁹ A person of ordinary skill in the art would readily recognize that the lens assembly (1) would also contain the camera portion of the device, because, otherwise, excessively complicated optics would be required to transmit the image from the lens to the camera located elsewhere.

¹⁷ "A CCD [charge coupled device] camera including a photographic lens assembly having a photographic lens for picking up an image ..." ('783 Patent, Abstract)

¹⁸ "According to the preferred embodiment of the present invention, a CCD camera is comprised of ... a photographic lens assembly for taking images, and an adjustment block coupled between the photographic lens assembly and the circuit box by revolving shafts and adapted for adjusting the position of the photographic lens assembly relative to the circuit box horizontally as well as vertically. The circuit box has a sliding hook adapted for securing the CCD camera to the display unit of the notebook computer when the display unit is opened." ('783 Patent, col. 1, ll. 26-37)

¹⁹ The '783 Patent discloses "a photographic lens assembly 1, an adjustment block 2, and a circuit box 3." ('783 Patent, col. 1, ll. 54-55)

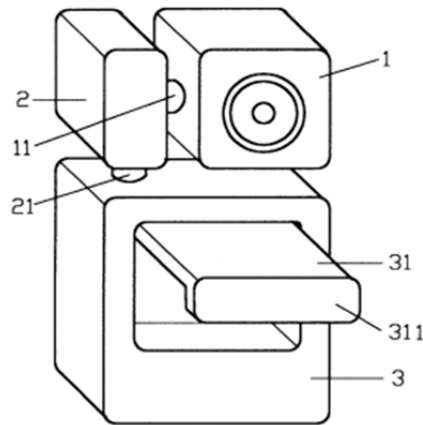


Figure 9. Reproduction of Figure 1 the '783 Patent publication illustrating a supporting device with an integrated camera.

... on any generally horizontal, substantially planar surface ...

60. The device described in the '783 Patent is capable of supporting the camera on a flat surface such as the ground or a tabletop. The flat bottom surface of the circuit box (3) would permit the digital camera to be positioned and supported on a generally horizontal planar surface. In addition, the sliding hook plate (31) can be moved in the sliding groove (32) to close the circuit box (Figure 10). The illustration suggests that a configuration wherein the sliding hook plate (31) is retracted would improve stability on a flat surface by reducing the potential overhang of the center of gravity.

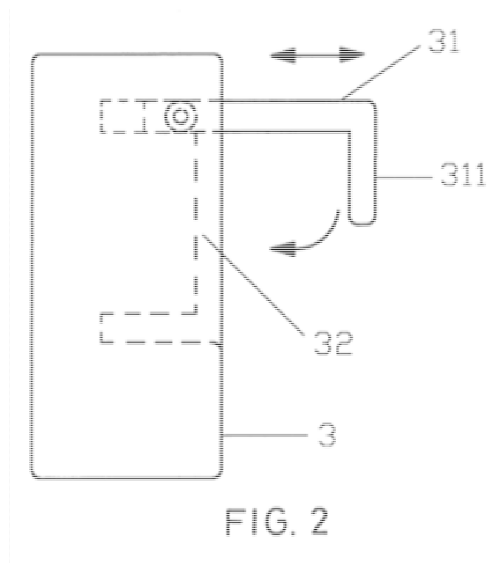


Figure 10. Reproduction of Figure 2 of the '783 Patent illustrating circuit box (3) with sliding hook plate (31).

... and on an object having a first surface and a second surface and an edge intersecting the first surface and the second surface ...

61. The '783 Patent discloses, in both the text and the illustrations, a device for supporting a camera on an object, such as a notebook computer display screen.²⁰ The disclosed device has a sliding hook that can be extended for securing the unit on a display screen,²¹ as illustrated in Figure 11. It is also evident in Figure 11 that a notebook computer display has a first surface, the back of the display, and a second surface, the display screen. Further, the notebook display, when oriented such that it is open toward a more vertical configuration, also has an edge that intersects the first and the second surfaces.

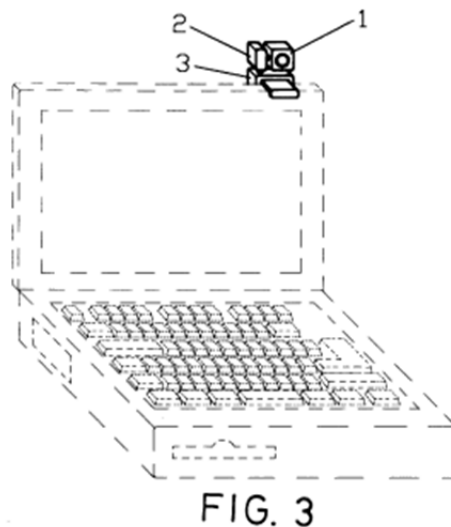


Figure 11. Reproduction of Figure 3 of the '783 Patent illustrating a camera supported on a notebook computer display.

... comprising: a hinge member adapted to be rotatably attached to the camera, said camera, when the hinge member is so attached, rotating, about a first axis of rotation, relative to said hinge member...

62. The adjustment block (2) is the major component of the '783 Patent device connecting the photographic lens assembly (1) and the circuit box (3) (Figure 9). The adjustment block (2) is the hinge member of this device. It is rotatably attached to the camera via a tubular

²⁰ "The circuit box has a sliding hook adapted for securing the CCD camera to the display unit of a notebook computer when the display unit is opened." ('783 Patent, col. 1, ll. 35-37)

²¹ "Referring to FIG. 3, and FIGS. 1 and 2 again, through the sliding hook plate 31, the CCD camera can be fastened to a part of a notebook computer, for example, the periphery of the display unit." ('783 Patent, col. 2, ll. 23-26)

revolving shaft (11), part of the photographic lens assembly (1),²² defining the first axis of rotation about which the photographic lens (1) can rotate relative to the adjustment block (2).

... and a support frame rotatably attached to said hinge member and configured to support said hinge member on the surface and the object ...

63. The circuit box (3) disclosed in the '783 Patent is the support frame for the device. It is rotatably attached to the adjustment block (2), the hinge member, via a tubular revolving shaft (21). As previously discussed, the circuit box is adapted to support the device on a flat surface or on an object.²³ A person of ordinary skill in the art could look at the illustrations in the '783 Patent and readily understand that the circuit box (3) can serve dual purposes of supporting the camera and enclosing electronics, and that the two purposes are independent.

... said hinge member rotating about a second axis of rotation relative to said support frame, said first axis of rotation being generally perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to the first surface when said hinge member is supported on the object ...

64. The tubular revolving shaft (21) joins the circuit box (3) with the adjustment block (2) and defines the second axis of rotation about which these parts rotate relative to each other. This second axis of rotation is generally perpendicular to the first axis of rotation, defined by tubular revolving shaft (11), illustrated in Figure 12. Further, when the device is supported on an object (Figure 11), the second axis of rotation is substantially parallel to the first surface. In the case of the object being a notebook computer display, this second axis of rotation is substantially parallel to the back of the display screen.

²² "The adjustment block 2 is coupled to the tubular revolving shaft 11 of the photographic lens assembly 1, having a downward tubular revolving shaft 21 at the bottom side coupled to the circuit box 3." ('783 Patent, col. 1, l. 61 – col. 2, l. 3)

²³ "... wherein said circuit box comprises a front sliding groove, and a sliding hook moveable in said front sliding groove, and adapted for closing said circuit box and securing said circuit box to an object alternatively, said sliding hook having a front end terminating in an angled retaining portion..." ('783 Patent, col. 2, ll. 48-53)

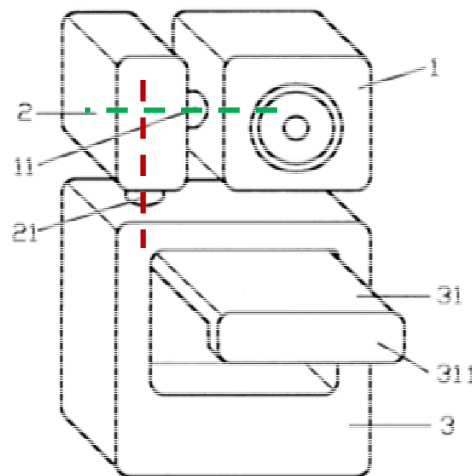


Figure 12. The first axis of rotation (green dashed line), defined by tubular revolving shaft (11), is substantially perpendicular to the second axis of rotation (red dashed line), defined by tubular revolving shaft (21).

... said support frame having a first disposition positioned on said generally horizontal, substantially planar surface, and said support frame having a second disposition attached to the object when said first surface and said second surface are inclined from a generally horizontal orientation, the camera being maintained adjacent said edge in said second disposition of said support frame.

65. The support frame of the device disclosed in the '783 Patent, the circuit box (3), has two dispositions (see Figure 10): the sliding hook plate (31) retracted into the sliding groove (32) or the sliding hook plate (31) extended. In one disposition, the device can be positioned on a substantially planar surface. Figure 2 in the '783 Patent (reproduced as Figure 10) suggests collapsing the hook increases stability on a flat surface by reducing the potential overhang of the center of gravity. In the second disposition, when the sliding hook plate (31) is extended, the device could be attached to an object such as a notebook computer display (see Figure 11). When the device is installed on such an object, the photographic lens assembly (1), including the camera of the device, is maintained adjacent to the edge of the object.

Claim 7

Apparatus according to claim 1 wherein the object is a display screen for a laptop computer, and the second surface is the front of the display screen and the first surfaces is the back of the display screen.

66. As described above, the '783 Patent discloses an apparatus according to Claim 1 of the '343 Patent. In addition, the '783 Patent discloses a device for use on a laptop computer where the first surface is the back of the display and the second surface is the display screen.

Claim 8

Apparatus according to claim 1 wherein the hinge member includes a body having a proximal and a distal end, a pivot element at said proximal end of said body adapted to rotatably attach the camera to the body so that the camera rotates about the first axis relative to the body, and a hinge element at said distal end of said body hingedly attaching said body to the support frame so that said body rotates, about the second axis, relative to the support frame.

67. As described above, the '783 Patent discloses an apparatus according to Claim 1 of the '343 Patent. The adjustment block (2) of the '783 Patent is the hinge member for the device and has a proximal and a distal end. The tubular revolving shaft (11) is the pivot element at the proximal end that rotatably attaches to the camera to the hinge member. The tubular revolving shaft also allows rotational motion of the camera relative to the body of the hinge member.

68. The tubular revolving shaft (21) is the hinge element positioned at the distal end of the hinge member. The tubular revolving shaft (21) is rotatably attached to the body of the circuit box (3), or the support frame, and allows the body of the hinge member to rotate about a second axis defined by the tubular revolving shaft (21) relative to the support frame.

69. The device of the '783 Patent is presented in Figure 13, highlighting the hinge member, with its proximal and distal ends, the first axis of rotation, and the second axis of rotation.

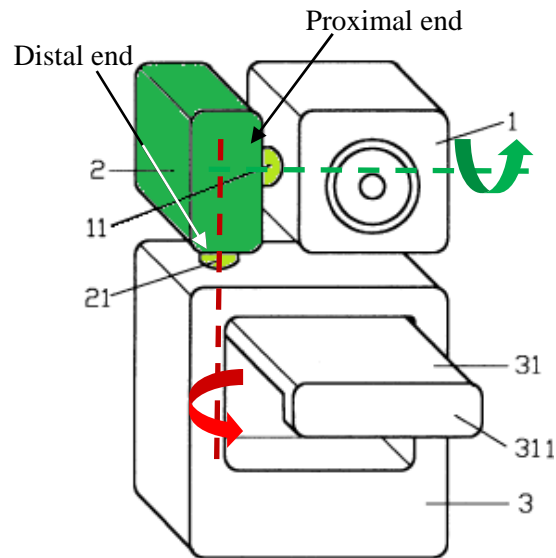


Figure 13. The hinge member of the '783 Patent device (highlighted in green) has a proximal end and a distal end rotatably attached to the camera and to the support frame, respectively. Rotational motion can occur at the proximal end about the first axis of rotation (green dashed line) and at the distal end about the second axis of rotation (red dashed line).

Claim 19

A camera clip for supporting a camera on a laptop computer, the laptop computer having a display screen which can be inclined from a generally horizontal position, an uppermost portion of the display screen defining an edge, comprising...

70. As described above, the '783 Patent discloses a device for supporting a camera on a laptop computer where the display screen, when opened and in a generally vertical orientation, has an uppermost edge.

... a hinge member adapted to be rotatably attached to the camera, said camera rotating about a first axis of rotation relative to said hinge member; and ...

71. As discussed in detail previously, the '783 Patent discloses an adjustment block (2), acting as the hinge member for the device, which rotatably attaches to the photographic lens assembly (1). The relative rotational motion of the camera with respect to the adjustment block occurs at the tubular revolving shaft (11) that defines a first axis of rotation.

... a support frame hingedly attached to said hinge member to engagingly support said hinge member on the display screen, said hinge member rotating over a second axis of rotation relative to said support frame, the camera being maintained adjacent the edge,

rotation of said support frame being prevented along an axis substantially parallel to said second axis where said second axis is substantially parallel to said edge.

72. As described above, the circuit box (3) of the '783 Patent is the support frame for the device. This support frame is attached to the adjustment block (2) through the tubular revolving shaft (21), allowing rotational motion of the support frame with respect to the hinge member about a second axis of rotation defined by tubular revolving shaft (21). A person of ordinary skill in the art could look at the illustrations in the '783 Patent and readily understand that the circuit box (3) can serve dual purposes of supporting the camera and enclosing electronics, and that the two purposes are independent.

73. When the device is attached to a notebook computer display (Figure 11), the camera is maintained adjacent to the edge of the display screen. In addition, by the nature of the design, when the support frame is hooked on the display, rotational motion of the support frame is prevented about an axis substantially parallel to the edge of the display. In addition, the '783 Patent discloses additional mechanisms to prevent such motion as well as other motion while installed.²⁴ In the illustrations of the '783 Patent, this axis parallel to the edge of the display is not parallel to the second axis of rotation (as defined previously), but is parallel to the first axis of rotation.

74. The axis arrangement disclosed in the '783 Patent is such that rotation of the circuit box (support frame) is prevented about an axis substantially parallel to display screen edge. Although this axis is parallel to the first axis, rather than the second axis described in the '343 Patent, it is a trivial and easily recognized change to swap the axes. The axis swap could be accomplished by simply turning the device on its side and using the disclosed vacuum mount, hook and loop material, etc. to attach the device to a display screen such that rotation along the display screen edge is prevented. The analysis of the other terms of Claim 19 is substantially unaffected. The combination of the first and second axes performs the same pan and tilt functions, regardless of which is named "first" or "second". The concept drawing presented in Figure 14 illustrates an embodiment of the '783 invention wherein the orientation of the first and second axes is swapped relative to the support frame such that the second axis of rotation is substantially parallel to the display edge.

²⁴ "Vacuum mount, hook and loop materials, etc., may be fastened to the CCD camera, so that the CCD camera can be mounted on a computer monitor." ('783 Patent, col. 2, ll. 29-31)

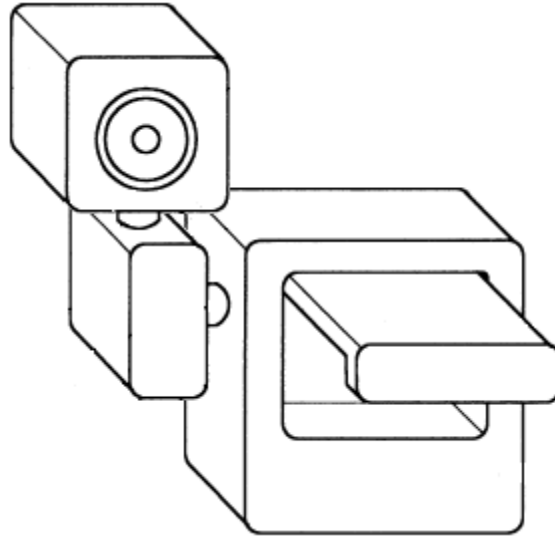


Figure 14. Concept drawing of the '783 device demonstrating alternative positions of the tubular revolving shafts (11) and (21) and therefore alternative orientations for the first and second axes of rotation. In this configuration, the second axis of rotation would be substantially parallel to the display edge if the device were supported on a laptop display.

75. Appendix D contains a claims chart analysis of the validity of the '343 Patent with respect to the '783 Patent. As shown in this chart, the '783 Patent anticipates each and every element of Claims 1, 7, and 8 of the '343 Patent. The chart further shows that with the exception of trivially swapping the first and second axes, the '783 Patent anticipates each and every element of Claim 19 of the '343 Patent. The final element of Claim 19 states that, "rotation of said support frame being prevented along an axis substantially parallel to said second axis where said second axis is substantially parallel to said edge." In the '783 Patent, rotation of the support frame relative to the display screen is prevented along an axis substantially parallel to the edge to which the camera is held adjacent. Whereas, in the disclosed device, the second axis is substantially perpendicular to this edge while the first axis is substantially parallel to it, the combination of the first and second axes provides the same degrees of freedom for the camera as described in the '343 Patent. Swapping which axis is called "the first axis" and which is called "the second axis" where at least one remains parallel to the adjacent edge is a trivial substitution that would be obvious to one of skill in the art. Such a swap would be motivated by a desire to have panning occur about an axis that intersects the focal axis, to minimize the effect of panning on focal distance. Therefore, as shown in the claim chart and the above analysis, and under my

understanding of the law, the '783 Patent anticipates or renders obvious each and every element of Claims 1, 7, 8, and 19 of the '343 Patent.

Opinion 3: Claims 1, 7, 8, and 19 of the '343 Patent were obvious to one of ordinary skill in the art in view of the '475 Patent in combination with camera head panning.

76. The '475 Patent is a design patent illustrating a device with an integrated camera for supporting the camera on either a substantially horizontal surface, such as a tabletop, or hooked onto an object, such as a laptop display. Although the '475 Patent is titled "Video Camera," a person of ordinary skill in the art would readily recognize that the '475 Patent discloses both a camera and a support device. Additionally, a person of ordinary skill in the art would readily recognize that the actual camera of the device is located in the head just behind the lens.

77. For the following analysis, the asserted claims of the '343 Patent are repeated in italics followed by discussion.

Claim 1

Apparatus for supporting a camera, having a lens ...

78. The '475 Patent presents an ornamental design for a video camera, as illustrated in Figure 15.

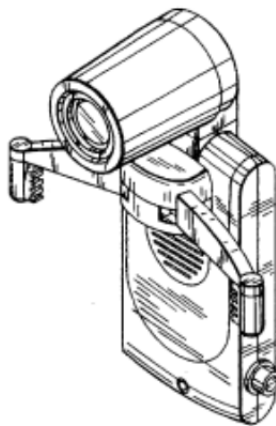


FIG. 1

Figure 15. Reproduction of Figure 1 of the '475 Patent illustrating a device supporting an integrated camera.

... on any generally horizontal, substantially planar surface ...

79. The '475 Patent illustrates the camera supported on a generally horizontal, planar surface (Figure 16).

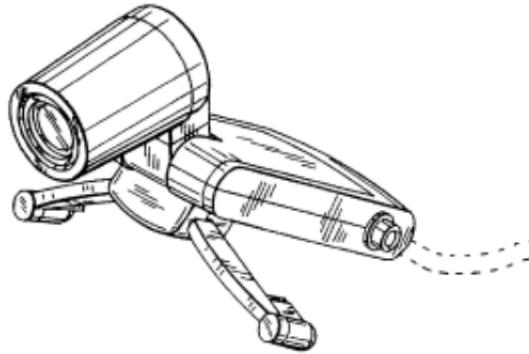


FIG. 2

Figure 16. Reproduction of Figure 2 of the '475 Patent illustrating the support configured such that the camera could be supported on a flat, planar surface.

... and on an object having a first surface and a second surface and an edge intersecting the first surface and the second surface ...

80. The device disclosed in the '475 Patent could be configured such that it is capable of being supported on an object. The patent illustrates the device hooked on what appears to be a monitor or laptop display,²⁵ see Figure 17. A laptop display has a first surface, the back of the display screen, and a second surface, the display screen. Further, a laptop display, when oriented such that it is open towards a vertical orientation, also has an edge that intersects the first and the second surfaces.

²⁵ “FIG. 16 is a fragmentary perspective view of the video camera placed on a fragmentary portion of a monitor ...” (’475 Patent, Description)

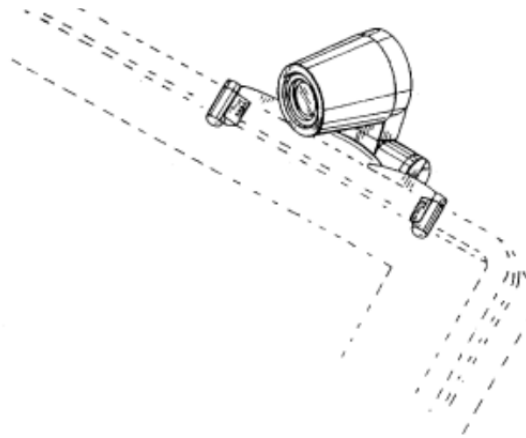


FIG. 16

Figure 17. Reproduction of Figure 16 of the '475 Patent illustrating a camera supported on a monitor or laptop display.

... comprising: a hinge member adapted to be rotatably attached to the camera, said camera, when the hinge member is so attached, rotating, about a first axis of rotation, relative to said hinge member...

81. The '475 Patent illustrations disclose a hinge member, just below the camera head (Figure 18). The attachment point of the camera to the hinge member is indicated in the patent illustrations as a set of lines indicative of a plane of separation between two parts. In Figure 18, the hinge member has been colored green and orange lines highlight the plane separating the camera from the hinge member. The '475 Patent strongly suggests a rotatable attachment between the camera head and hinge member by virtue of the lines suggesting a joint. It would be readily apparent to one of skill in the art that this attachment could be made with a rotatable connection, allowing the camera to pan, as is a standard practice for cameras supports. This idea of a rotatable connection at the camera head is illustrated by the demonstrative combination of Figures 4 and 5 from the '475 Patent, presented in Figure 19 as a concept drawing. A person of ordinary skill in the art at the time of the '343 Patent filing would have been motivated to include panning, because this is a useful feature found nearly universally on camera mounts,²⁶ and its lack would have been a competitive disadvantage.

²⁶ For example, a tripod head that could not pan would be significantly handicapped.

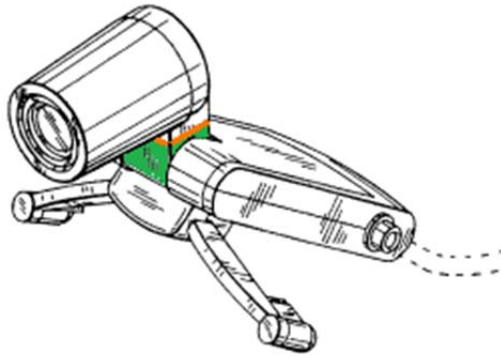


FIG. 2

Figure 18. Reproduction of Figure 2 of the '475 Patent illustrating the hinge member (highlighted in green) and the connection between the hinge member and the camera (highlighted in orange)

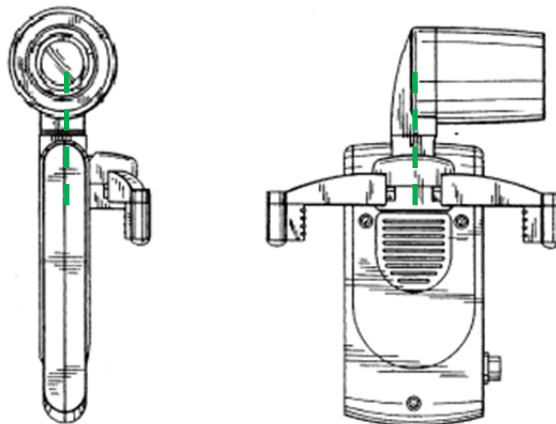


Figure 19. Concept drawing generated from Figures 4 and 5 of the '475 Patent demonstrating a rotatable attachment between the hinge member and the camera head. The green dashed line shows the axis of rotation for relative motion between the camera and the hinge member.

... and a support frame rotatably attached to said hinge member and configured to support said hinge member on the surface and the object ...

82. The '475 Patent discloses a device with a body (support frame) for supporting the camera. As previously discussed, the device is capable of supporting the camera on a flat surface as well as on an object. The support frame is rotatably attached to the hinge member, as illustrated in Figure 20. A person of ordinary skill in the art could look at the illustrations in

the '475 Patent and readily understand that the device body can serve dual purposes of supporting the camera and enclosing electronics, and that the two purposes are independent.

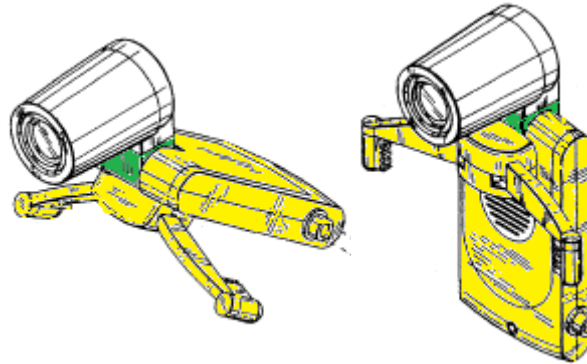


Figure 20. The support frame of the '475 Patent device (highlighted in yellow) attaches to the hinge member (highlighted in green). The two configurations indicate a hinged or rotatable attachment between the hinge member and the support frame.

... said hinge member rotating about a second axis of rotation relative to said support frame, said first axis of rotation being generally perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to the first surface when said hinge member is supported on the object ...

83. The support frame and the hinge member of the device disclosed in the '475 Patent are able to rotate relative to each other, as illustrated in Figure 20. The axis about which this rotation occurs is the second axis of rotation (Figure 21). This second axis of rotation is generally perpendicular to the first axis of rotation defined previously as the axis about which potential rotational panning motion between the camera head and the hinge member can occur. In addition, this second axis of rotation is substantially parallel to the first surface of a supporting object, that is, the back of the display screen of a laptop display, when the device is supported on such an object (Figure 17).

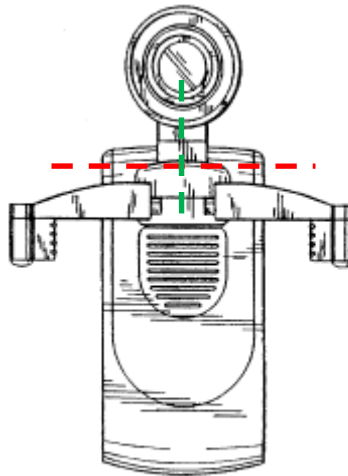


FIG. 12

Figure 21. Reproduction of Figure 12 of the '475 Patent, illustrating (a) the easily implemented first axis of rotation (green dashed line) for relative motion between the camera head and the hinge member, and (b) the second axis of rotation (red dashed line) for relative motion between the hinge member and the support frame. These axes of rotation are generally perpendicular to each other.

... said support frame having a first disposition positioned on said generally horizontal, substantially planar surface, and said support frame having a second disposition attached to the object when said first surface and said second surface are inclined from a generally horizontal orientation, the camera being maintained adjacent said edge in said second disposition of said support frame.

84. The support frame of the '475 Patent device has at least a first and second disposition (Figure 20). These different configurations allow the device to support the camera on a generally horizontal, substantially planar surface, such as a table (Figure 16), or attached to an object, such as an opened laptop display (Figure 17). When the device is attached to an object such as a laptop display, the camera is maintained adjacent to the previously defined edge that intersects the first and second surfaces of the object.

Claim 7

Apparatus according to claim 1 wherein the object is a display screen for a laptop computer, and the second surface is the front of the display screen and the first surfaces is the back of the display screen.

85. As previously discussed, the '475 Patent discloses an apparatus according to Claim 1 of the '343 Patent. In addition, the '475 Patent discloses that this device can support a camera on a monitor, i.e. computer or laptop display.

Claim 8

Apparatus according to claim 1 wherein the hinge member includes a body having a proximal and a distal end, a pivot element at said proximal end of said body adapted to rotatably attach the camera to the body so that the camera rotates about the first axis relative to the body, and a hinge element at said distal end of said body hingedly attaching said body to the support frame so that said body rotates, about the second axis, relative to the support frame.

86. As previously discussed, the '475 Patent discloses an apparatus according to Claim 1 of the '343 Patent.

87. The hinge member (Figure 18) has a proximal end and a distal end. The proximal end attaches to the camera, while the distal end attaches to the support frame. One of ordinary skill in the art would readily see the advantage of providing a rotatable attachment between the camera head and the hinge member, allowing relative rotation between these two elements about a first axis of rotation, thus providing panning capabilities to the camera. A person of ordinary skill in the art at the time of the '343 Patent filing would have been motivated to include panning because this is a useful feature found nearly universally on camera mounts and its lack would have been a competitive disadvantage.

88. The '475 Patent discloses relative rotation between the hinge member and the support frame about a second axis of rotation, provided at a hinge element connection between the two. The motions of the device components, as well as the first and second axes of rotation, are illustrated in Figure 22.

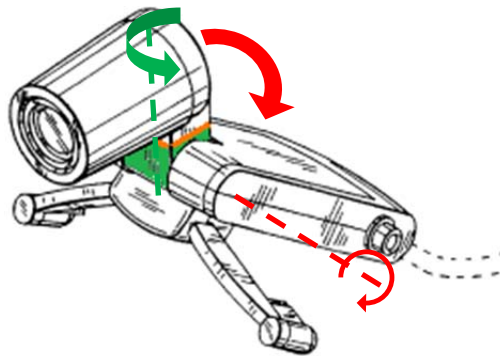


FIG. 2

Figure 22. The hinge member of the '475 Patent device hingedly attaches to the support frame at its distal end (the lower portion of the hinge member as oriented in the illustration). Rotation of the hinge member relative to the support frame occurs about the second axis of rotation (red dashed line). The hinge member attaches

to the camera head at its proximal end (the upper portion of the hinge member as oriented in the illustration). It would be readily recognized by one of skill in the art as advantageous to allow the camera head to rotate at this attachment point (orange line) about a first axis of rotation (green dashed line).

Claim 19

A camera clip for supporting a camera on a laptop computer, the laptop computer having a display screen which can be inclined from a generally horizontal position, an uppermost portion of the display screen defining an edge, comprising...

89. The '475 Patent discloses that this device can support a camera on a monitor, i.e. computer or laptop display (Figure 17). This illustration from the '475 Patent shows a monitor with a visible front (second surface), a visible edge, and an implied back (first surface).

... a hinge member adapted to be rotatably attached to the camera, said camera rotating about a first axis of rotation relative to said hinge member; and ...

90. As discussed previously, the '475 Patent illustrations disclose a hinge member attached to a camera head. The patent does not disclose how the attachment between the two components is made, but it would have been readily recognized by one skilled in the art to make this attachment rotatable such that the camera could be panned, as is a standard practice for connecting cameras to supports (Figure 19). A person of ordinary skill in the art at the time of the '343 Patent filing would have been motivated to include panning, a useful feature found nearly universally on camera mounts whose lack would have been a competitive disadvantage.

... a support frame hingedly attached to said hinge member to engagingly support said hinge member on the display screen, said hinge member rotating over a second axis of rotation relative to said support frame, the camera being maintained adjacent the edge, rotation of said support frame being prevented along an axis substantially parallel to said second axis where said second axis is substantially parallel to said edge.

91. The '475 Patent discloses a support frame that supports the hinge member on a monitor or display screen. A person of ordinary skill in the art could look at the illustrations in the '475 Patent and readily understand that the device body can serve dual purposes of supporting the camera and enclosing electronics, and that the two purposes are independent. When engaged on a display screen, the camera head is maintained adjacent to the edge of the screen, as illustrated in Figure 17. One of skill in the art would recognize that when installed on a laptop display, by the nature of the design including the hooked feet, rotation of the support frame relative to the display screen about an axis substantially parallel to the display screen edge

is prevented. Further, when installed on such an object, the second axis of rotation, as previously defined, is substantially parallel to the display screen edge.

92. Appendix E contains a claims chart analysis of the validity of the '343 Patent with respect to the '475 Patent. The technology was available and it would have been readily apparent to one of skill in the art at the time of the filing date of the '343 Patent that a camera head that was not rotatably mounted to provide panning capabilities would have been impractical and at a competitive disadvantage. Therefore, as shown in the claim chart and the above analysis, and under my understanding of the law, the '475 Patent anticipates or renders obvious each and every element of Claims 1, 7, 8, and 19 of the '343 Patent.

Opinion 4: Claims 1, 7, 8 and 19 of the '343 Patent were anticipated by the '308 Patent. In addition and in the alternative, Claims 1, 7, 8 and 19 of the '343 Patent were obvious in light of the '308 Patent in view of the prior art.

93. The '308 Patent describes an apparatus for supporting a camera, either on a substantially flat surface or on an object. The camera is rotatably attached to the device, which is adjustable to provide rotational relative motion between the camera and an intermediate hinge member, as well as between the hinge member and the support frame, which interfaces with the surface or object. While the illustrations in the '308 Patent show the device supporting a camera on a person, a person of ordinary skill in the art would recognize the device is not limited by the specification or claims to any particular size scale. A person of ordinary skill in the art would also have readily recognized that the Irfune device could be manufactured using ordinary processes (such as injection molding, die casting, or metal forming) and materials (such as plastic, light alloy, or small-diameter solid or hollow metal extrusions) to yield a device that was lightweight, stable, properly sized, and readily attached to a laptop display. For the following analysis, the asserted claims of the '343 Patent are repeated in italics followed by discussion.

Claim 1

Apparatus for supporting a camera, having a lens ...

94. The '308 Patent, entitled "Camera Support", describes a support for a camera.^{27, 28}

²⁷ "This invention relates generally to a camera support and, more particularly, to an improved camera support having a substantial degree of flexibility and utility." ('308 Patent, col. 1, ll. 6-8)

²⁸ "The present invention is directed to new and improved camera support having numerous features, benefits and advantages." ('308 Patent, col. 1, ll. 34-36)

... on any generally horizontal, substantially planar surface ...

95. The '308 Patent apparatus is capable of supporting the camera on a generally horizontal, substantially planar surface (Figure 23).²⁹ The patent describes the device as “*self-standing if placed on a planar member.*”^{30, 31}

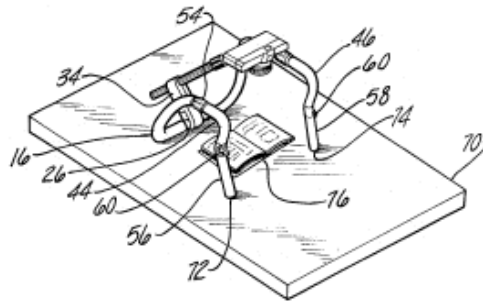


Fig-5

Figure 23. Reproduction of Figure 5 of the '308 Patent illustrating a camera supported by the device on a planar surface.

... and on an object having a first surface and a second surface and an edge intersecting the first surface and the second surface ...

96. In addition to supporting the camera on a flat surface, the '308 Patent device can support the camera on an object, illustrated in the patent, for example, on a person (Figure 24). The supporting object has two surfaces and an intersecting edge. In the preferred embodiment disclosed, and depicted in Figure 24, the object is a person where the person's back is the first surface, the person's chest is the second surface, and the intersecting edge is comprised of the top of the person's shoulders. It would have been readily apparent that the preferred embodiment could similarly support a camera on the back of an upholstered chair, the top of a wall, and similar structures. In addition, it would have been readily apparent that the device disclosed in the '308 Patent could be made a practically any size scale using ordinary materials and processes, such that it could support an appropriately-sized camera on smaller or thinner objects.

²⁹ FIG. 5 is an illustration of the camera support of the present invention on a planar surface so that close-up photographs may be taken.” ('308 Patent, col. 2, ll. 1-3)

³⁰ “A camera support which may be hooked over the shoulders of the wearer is self-standing if placed on a planar member.” ('308 Patent, Abstract)

³¹ “In addition, the support of the present invention is self-standing. That is, the support adapted to be placed on a planar surface for supporting (sic) a camera or the like...” ('308 Patent, col. 1, ll. 42-44)

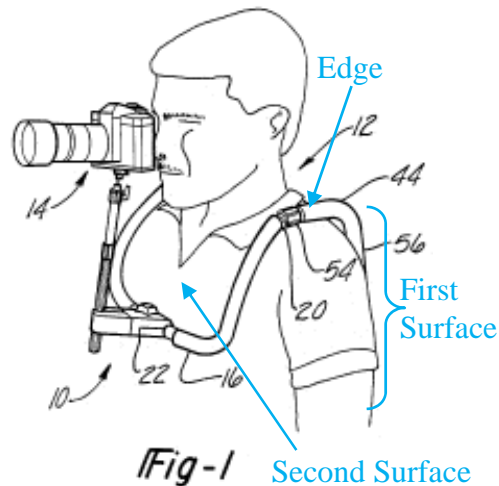


Figure 24. Reproduction of Figure 1 '308 Patent illustrating a camera supported on an object, specifically, a person's shoulders. The person has a first surface (back), a second surface (chest), and an intersecting edge (top of the shoulders).

... comprising: a hinge member adapted to be rotatably attached to the camera, said camera, when the hinge member is so attached, rotating, about a first axis of rotation, relative to said hinge member...

97. As described in the '308 Patent, the camera (14) is secured to the support of the device through mounting means (22),³² the hinge member for this apparatus, and mounting tube (42). The camera attaches to one end of mounting tube (42) while the other end of mounting tube (42) is clamped in in mounting means (22).³³ The construction and components of the '308 apparatus are presented in Figure 25, a partially exploded side view of the device.

³² "Mounting means 22 are provided at the central portion of the base of the U-shaped tube 16 for securing the camera to the support. The mounting means 22 provides 360° rotation about each of three perpendicular axes and, in addition, linear adjustment, all as will be more fully described." ('308 Patent, col. 2, ll. 21-26)

³³ "The camera 14 may be mounted via a suitable, conventional bayonet mounting, to one end of the mounting tube 42." ('308 Patent, col. 2, ll. 63-65)

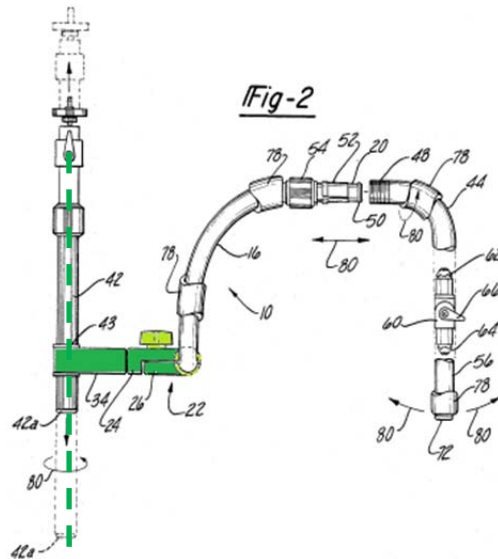


Figure 25. Reproduction of Figure 2 from the '309 Patent. The hinge member is highlighted in green. Relative rotational motion between the hinge member and the camera (which mounts on the end of mounting tube (42)) occurs with rotation of mounting tube (42) about a first axis of rotation (green dashed line) and is illustrated as movement (80) in the figure.

98. When the camera is attached to the device, relative rotational motion between the camera (14) and the hinge member (22) is possible through rotation of the mounting tube (42).³⁴ The first axis of rotation coincides with the length of mounting tube (42).

... and a support frame rotatably attached to said hinge member and configured to support said hinge member on the surface and the object ...

99. The '308 Patent device includes a support frame that rotatably attaches to the hinge member and can be configured to support the hinge member, and therefore the camera, on either a surface or an object (Figure 23 and Figure 24). The patent discloses a camera support (10) which includes at least the U-shaped hollow metal tube (16), the upper shoulder tubes (44) and (46), and the lower shoulder tubes (56) and (58) (Figure 25).^{35, 36, 37} The '308 Patent further

³⁴ "A mounting tube 42 is positioned within the recesses 38 of the mounting means 22, with a nylon bushing 43 surrounding the mounting tube 42. ... The mounting tube may be adjustable in length and may be rotated within the recesses 38 upon loosening the thumb wheel 40." ('308 Patent, col. 2, ll. 59-67)

³⁵ "The camera support 10 of the present invention includes a first generally U-shaped hollow metal tube 16 having opposed, spaced apart first and second ends 18, 20. ..." ('308 Patent, col. 2, ll. 11-14).

³⁶ "The ends 18, 20 of the first tube 16 are telescopically received within a pair of upper shoulder tubes 44, 46." ('308 Patent, col. 3, ll. 17-19)

³⁷ "Lower shoulder tubes 56, 58 which are essentially straight tubular members, are attached to the open ends of the upper shoulder tubes 44, 46, respectively." ('308 Patent, col. 3, ll. 43-46)

describes that the mounting means (22), the hinge member for the device, rotatably attaches to the metal tube (16), a portion of the support frame, at the recesses (27) of the clamp (24) and (26).

... said hinge member rotating about a second axis of rotation relative to said support frame, said first axis of rotation being generally perpendicular to said second axis of rotation, said second axis of rotation being substantially parallel to the first surface when said hinge member is supported on the object ...

100. The clamped tube connection between the support frame and the hinge member allow these elements to rotate relative to each other about a second axis of rotation (Figure 26). As previously discussed, the camera, attached to the mounting tube (42), can rotate relative to the hinge member about a first axis of rotation. These two axes of rotation are substantially perpendicular to each other.³⁸ Further, when the device is supported on an object, the second axis of rotation is substantially parallel to the first surface. For the preferred embodiment presented in the patent (Figure 24), the second axis of rotation is substantially parallel to the person's back. It would be similarly parallel to the back (or front) of a chair or a wall.

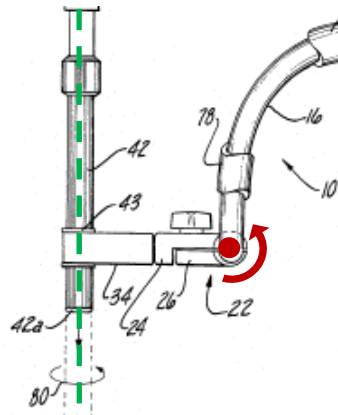


Figure 26. The support frame (labeled 10) rotates relative to the hinge member (labeled 22) about a second axis of rotation (into the page at the red dot and directionally indicated by the arrow). The camera attached to the mounting tube (42) rotates relative to the hinge member about a first axis of rotation (green dashed line). The first and second axes of rotation are substantially perpendicular to each other.

... said support frame having a first disposition positioned on said generally horizontal, substantially planar surface, and said support frame having a second disposition attached to the object when said first surface and said second surface are inclined from a generally horizontal orientation, the camera being maintained adjacent said edge in said second disposition of said support frame.

³⁸ "The mounting means 22 provides 360° rotation about each of three perpendicular axes and, in addition, linear adjustment, all as will be more fully described." ('308 Patent, col. 2, ll. 23-26)

101. As previously discussed, the '308 device has at least two dispositions, wherein the first disposition allows a camera to be supported on a planar surface (Figure 23). In addition, when in a second disposition, the device allows the camera to be supported on an object, such as a person. A person has a first and second surface that clearly can be inclined from a generally horizontal orientation. When supported on the object, such as a person, chair, or wall, the camera is maintained adjacent to the object's edge.

Claim 7

Apparatus according to claim 1 wherein the object is a display screen for a laptop computer, and the second surface is the front of the display screen and the first surfaces is the back of the display screen.

102. The device described in the '308 Patent can support a camera on flat surfaces or on an object; however the patent does not specifically disclose use of the device on a laptop screen. Nevertheless, it would have been readily apparent that the device disclosed in the '308 Patent could be made a practically any size scale using ordinary materials and processes, such that it could support a camera on smaller or thinner objects, including display screens. With the emergence of video conferencing software runnable on laptops without built-in cameras, there would be a clear need for a device to easily affix an external camera to a laptop display. Further, it would be readily apparent to a person of skill in the art, motivated by such video conferencing needs, that the device described in the '308 Patent could be used for such an application. Moreover, support systems designed to support cameras on laptop display screens were known in the art, such as the '783 Patent (discussed above). Persons skilled in the art would have been motivated to combine the teachings of the '783 Patent with the '308 Patent to create a device readily attached to a display.

Claim 8

Apparatus according to claim 1 wherein the hinge member includes a body having a proximal and a distal end, a pivot element at said proximal end of said body adapted to rotatably attach the camera to the body so that the camera rotates about the first axis relative to the body, and a hinge element at said distal end of said body hingedly attaching said body to the support frame so that said body rotates, about the second axis, relative to the support frame.

103. As described above, the '308 Patent discloses an apparatus according to claim 1 of the '343 Patent.

104. The '308 device includes a mounting means (22), the hinge member, that has a proximal end and a distal end (Figure 27). At the proximal end, there is a pivot element,

mounting tube (42) in recesses (38) that is adapted to rotatably attach to the camera. The camera is then able to rotate relative to the hinge member about the first axis of rotation. At the distal end of the hinge member, there is a hinge element, metal tube (16) in recesses (27) that hingedly attaches to the support frame. The support frame is then able to rotate relative to the hinge member about the second axis of rotation. Both the proximal and distal end attachments are made through tubes (16 and 42) clamped by the mounting means at recesses (27 and 38). This type of attachment provides relative rotation of the hinge member with respect to the support frame (about the second axis) or the camera (about the first axis).

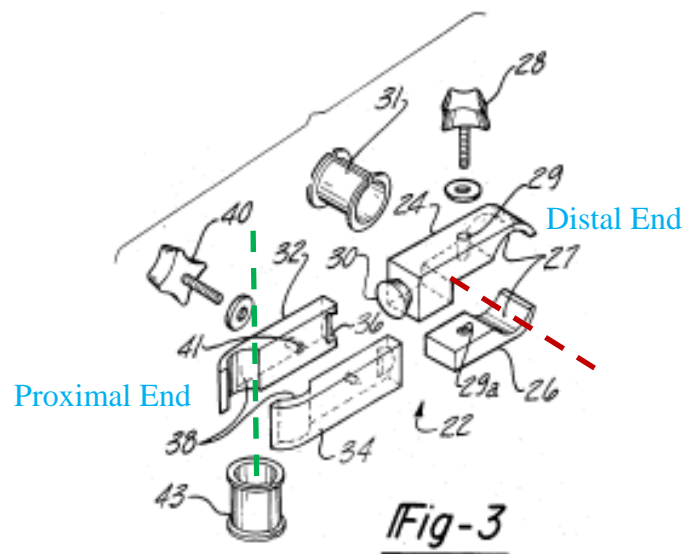


Figure 27. The hinge member has a proximal end and a distal end. Both the proximal and distal end attachments are made through tubes (16 or 42) clamped by the mounting means at recesses (27 or 38), providing rotation of the hinge member relative to the support frame or the camera at the second axis of rotation (red dashed line) or the first axis of rotation (green dashed line), respectively.

Claim 19

A camera clip for supporting a camera on a laptop computer, the laptop computer having a display screen which can be inclined from a generally horizontal position, an uppermost portion of the display screen defining an edge, comprising...

105. As discussed above with respect to Claim 7 of the '343 Patent, the device described in the '308 Patent can support a camera on flat surfaces or on an object; however the patent does not specifically disclose use of the device on a laptop screen. Nevertheless, it would have been readily apparent that the device disclosed in the '308 Patent could be made at any practical size scale, using ordinary processes (such as injection molding, die casting, or metal forming) and materials (such as plastic, light alloy, or small-diameter solid or hollow metal

extrusions), such that it could support an appropriately-sized camera on smaller or thinner objects, including display screens. With the emergence of video conferencing software runnable on laptops without built-in cameras, there would be a clear need for a device to easily affix an external camera to a laptop display. Further, it would be readily apparent to a person of skill in the art, motivated by such video conferencing needs, that the device described in the '308 Patent could be used for such an application.

... a hinge member adapted to be rotatably attached to the camera, said camera rotating about a first axis of rotation relative to said hinge member; and ...

106. As discussed in detail previously, the '308 Patent discloses a mounting means (22) which is the hinge member of the device. The hinge member rotatably attaches to the camera through mounting tube (42), and allows the camera to rotate (motion 80) relative to the hinge member about a first axis of rotation (Figure 26).

... a support frame hingedly attached to said hinge member to engagingly support said hinge member on the display screen, said hinge member rotating over a second axis of rotation relative to said support frame, the camera being maintained adjacent the edge, rotation of said support frame being prevented along an axis substantially parallel to said second axis where said second axis is substantially parallel to said edge.

107. The camera support (10) is the support frame for the '308 device, supporting the device and the camera on planar surfaces or objects. The preferred embodiment is disclosed as supporting the camera on a person, as opposed to a laptop display, wherein the person has two surfaces and an intersecting edge. When supported on the person, the camera is positioned adjacent to the edge, the person's shoulders.

108. One of skill in the art would recognize that when installed on an object, by the nature of the design, rotation of the support frame relative to the object about an axis substantially parallel to the edge would be prevented, due to the enveloping nature of the frame. In addition, the '308 Patent explains that “[t]he camera support of the present invention is adjustable in size from front to back, from side-to-side and in an angular manner to accommodate wearers of different size and shape and still provide a snug fit. This makes the support more comfortable when worn for long periods of time.” (col. 1, ll. 36-41).

109. Moreover, support systems designed to support cameras on laptop display screens were known in the art, such as the '783 Patent (discussed above). Persons skilled in the art would

XI. RESERVE ALL RIGHTS TO SUPPLEMENT

121. I reserve the right to supplement any of the topics of this report, including relying on other materials not cited herein.

Dated: June 25, 2012

A handwritten signature in blue ink, appearing to read 'R. W. Klopp', is positioned above the printed name and title.

Richard W. Klopp, Ph.D., P.E.
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by the California Board for Professional
Engineers and Land Surveyors